

STUDIES IN THE EUPATORIEAE (ASTERACEAE) LXXXI.

THE GENUS, PHANEROSTYLIS.

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The name Phanerostylis is raised here to generic rank from the subgeneric level. Gray in his original description emphasized the unusually broad style branches which are one of the distinctive features. Harcombe and Beaman (1967) made an exhaustive comparison of the superficial characteristics of two species of the group and found relationship to a strikingly distinctive monocephalic member of the genus Brickellia. Our own review of Brickellia and its relatives has shown a third species of the Phanerostylis group that is not monocephalic and which indicates other relationships than those suggested by Harcombe and Beaman. In addition there are many important features evident at the microscopic level all suggesting a status related to but outside of the genus Brickellia.

Distinctive features of Phanerostylis include the 5 angled achenes, the flaring corollas, the more erect spreading hairs on the stylar node and the broader style branches. The corolla lobes and the style branches both show a papillosity not seen in any other members of the Brickellia complex. It seems worth noting that the broadened condition and papillosity of the corolla lobes and style branches might be influenced by a single gene, and we have seen evidence of similar parallel development of these structures in other Eupatorieae. The similarities to Brickellia are comparatively subtle and include the habit, the structure of the carpodia and the pappus setae and, of course, the chromosome number $N = 9$.

The removal of Phanerostylis glutinosus from the genus Barroetia has the additional effect of purifying the latter genus which can now be consistently recognized by the prickles on the tips of the lobes of its leaves and the 5 angled achenes.

Phanerostylis (A.Gray) R.M.King & H.Robinson,
new status.

Eupatorium (Phanerostylis) A. Gray, Proc. Amer.
Acad. 9: 205.1882.

Erect to decumbent many branched subshrubs. Leaves opposite, long petioled, blades ovate to ovate-lanceolate. Inflorescence scarcely branched, or monocephalous. Involucre of ca. 30-50 oblong to lanceolate phyllaries in 3-7 series. Receptacle flat or slightly convex, glabrous, 25-50 flowers per head, corollas funnellform, glabrous, 5-lobed, lobes scarcely longer than wide, papillose on both surfaces, stomates absent; anther collar short to rather elongate, lower cells subquadrate, with distinct annular thickenings. Anther appendage slightly shorter to distinctly longer than wide, composed of large thin-walled cells; stylar node distinctly enlarged, covered with rather long sinuous hairs, stylar appendage long, enlarged, densely covered with long papillae. Achenes prismatic, 4-5 ribbed, setiferous, carpopodia distinct, asymmetrical, short, composed of thick-walled cells, pappus of ca. 25 externally nearly smooth laterally densely fringed setae. Chromosome number determined as $X = 9$ (Turner & King, 1964).

Type species: Bulbostylis pedunculosa A. P. Decandolle.

Our studies of the genus indicate that it contains the following three species.

Phanerostylis coahuilensis (A.Gray) R.M.King & H.Robinson, comb. nov. Eupatorium coahuilensis A.Gray, Proc. Amer. Acad. 17: 205. 1882. Mexico.

Phanerostylis glutinosa (T.S.Brandege) R.M.King & H. Robinson, comb. nov. Barroetia glutinosa T.S. Brandegee, Zoe 5: 262. 1908. Mexico.

Phanerostylis pedunculosa (A.P.Decandolle) R.M.King & H.Robinson, comb. nov. Bulbostylis pedunculosa A.P.Decandolle, Prodr. 5: 138. 1836. Mexico.

Reference

Turner, B.L. & R.M.King. 1964. Chromosome numbers in the Compositae VIII. Mexican and Central American species. Southwest Nat. 9: 27-39.

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